 $i \geq 1, j \geq 1$ Fig. 1

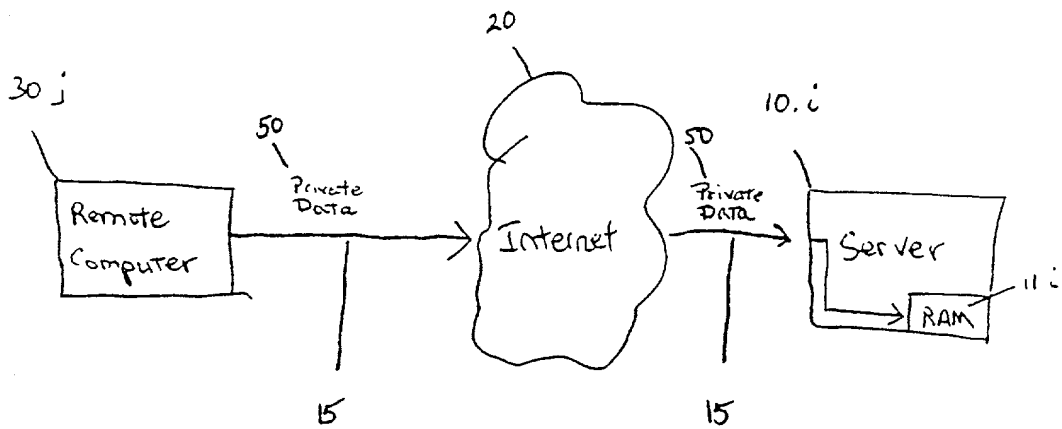


Fig. 2a

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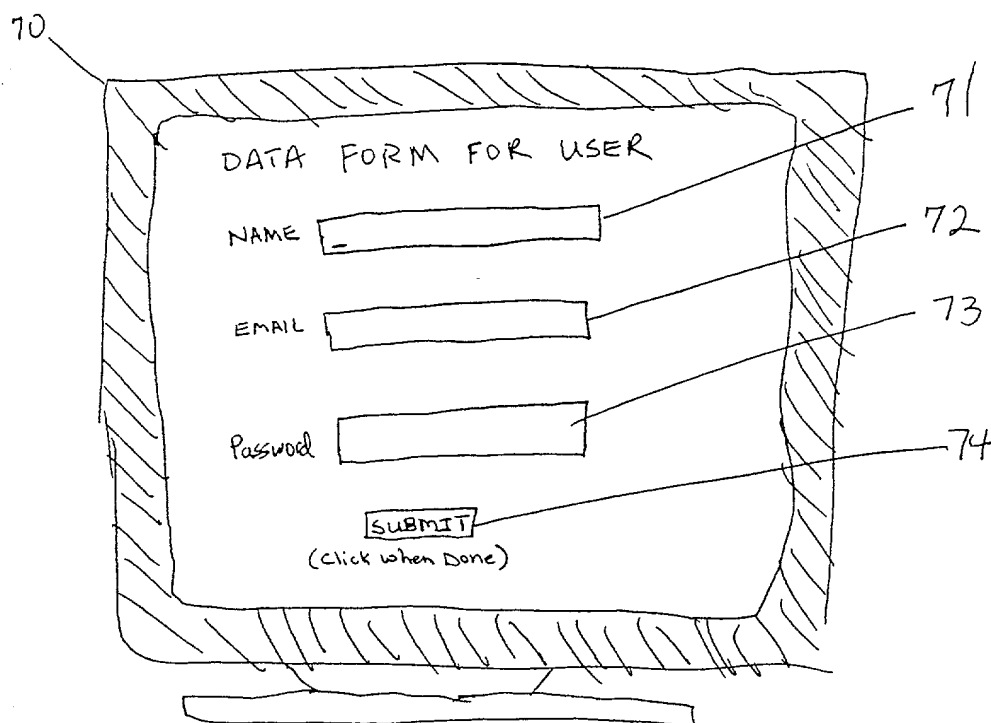


FIG. 2b

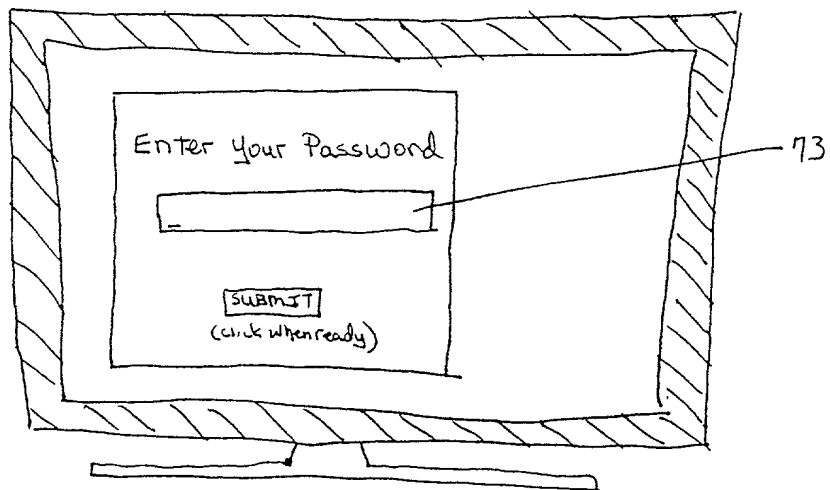
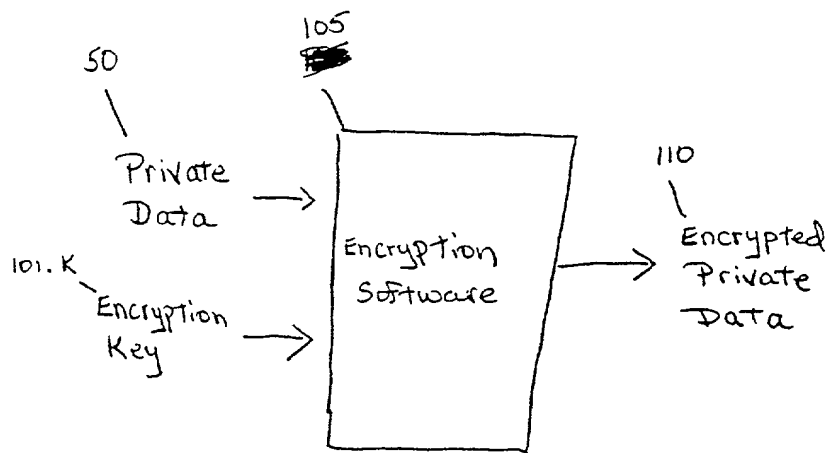


FIG. 2c



$K \geq 1$

Fig. 3

User Key 100

G	o	o	s	e		G	o	s	s	a	g	e	1	2	3
---	---	---	---	---	--	---	---	---	---	---	---	---	---	---	---

v\_set 300

F	o	o	t	B	a	l	l
---	---	---	---	---	---	---	---

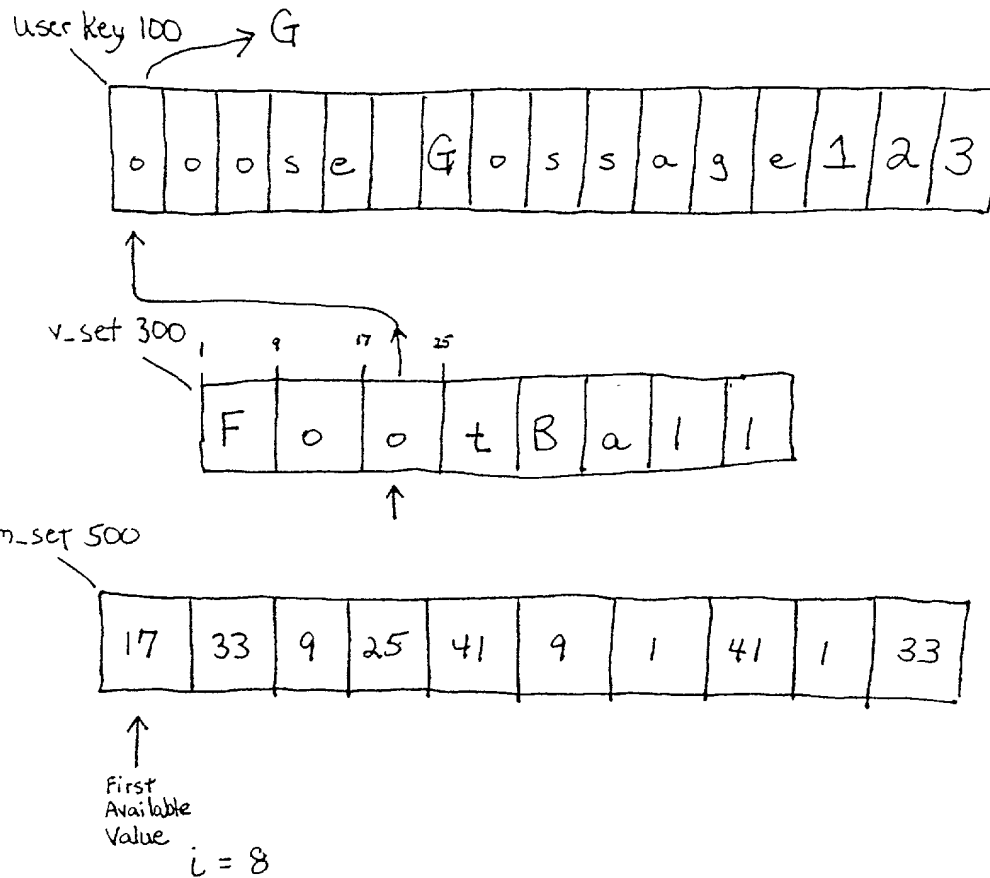
m\_set 500

17	33	9	25	41	9	1	41	1	33
----	----	---	----	----	---	---	----	---	----

$$i = 8$$

$K = n * i + 1$ , where  $n = 0$  initially  
and  $n = n + 1$  after replacement

FIG. 4a (Pre-Replacement)



$$K = n * i + 1, \text{ where } n = 0 \text{ initially}$$

and  $n = n + 1$  after replacement

$$\underline{K = 1}$$

FIG. 4b (Replacement,  $n = 0$ )

User Key 100 → 0

0	B	0	s	e		G	0	s	s	a	g	e	1	2	3
---	---	---	---	---	--	---	---	---	---	---	---	---	---	---	---

v-set 300

	9	17	25	33	41				
F	o	o	t	B	a	l	l		

m-set 500

17	33	9	25	41	9	1	41	1	33
----	----	---	----	----	---	---	----	---	----

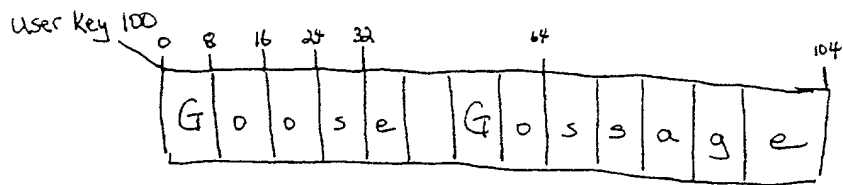
Next Available Value

$L = 8$

$K = n * L + 1$ , where  $n = 0$  initially  
and  $n = n + 1$  after replacement

$K = 9$

FIG. 4c (Replacement,  $n = 1$ )



i-set 200

8	16	8	32	24	8	8	32
---	----	---	----	----	---	---	----

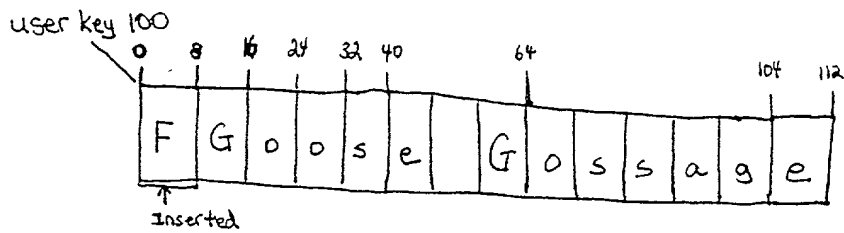
K-set 400

1	41	9	41	17	9	1	25	33	9
---	----	---	----	----	---	---	----	----	---

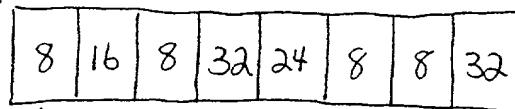
v-set 300

F	o	o	+	B	a		
---	---	---	---	---	---	--	--

5a  
FIG. ~~5a~~ (Pre-Insertion)

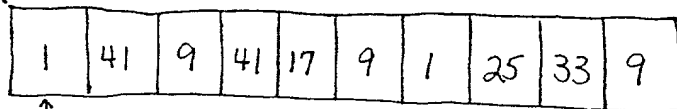


i-set 200



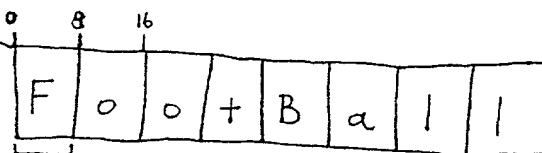
K-set 400

↑  
First Available  $\{L=8\}$



↑  
First Available

v-set 300



↑  
First Available  
i bits

FIG. 5b (First Insertion)

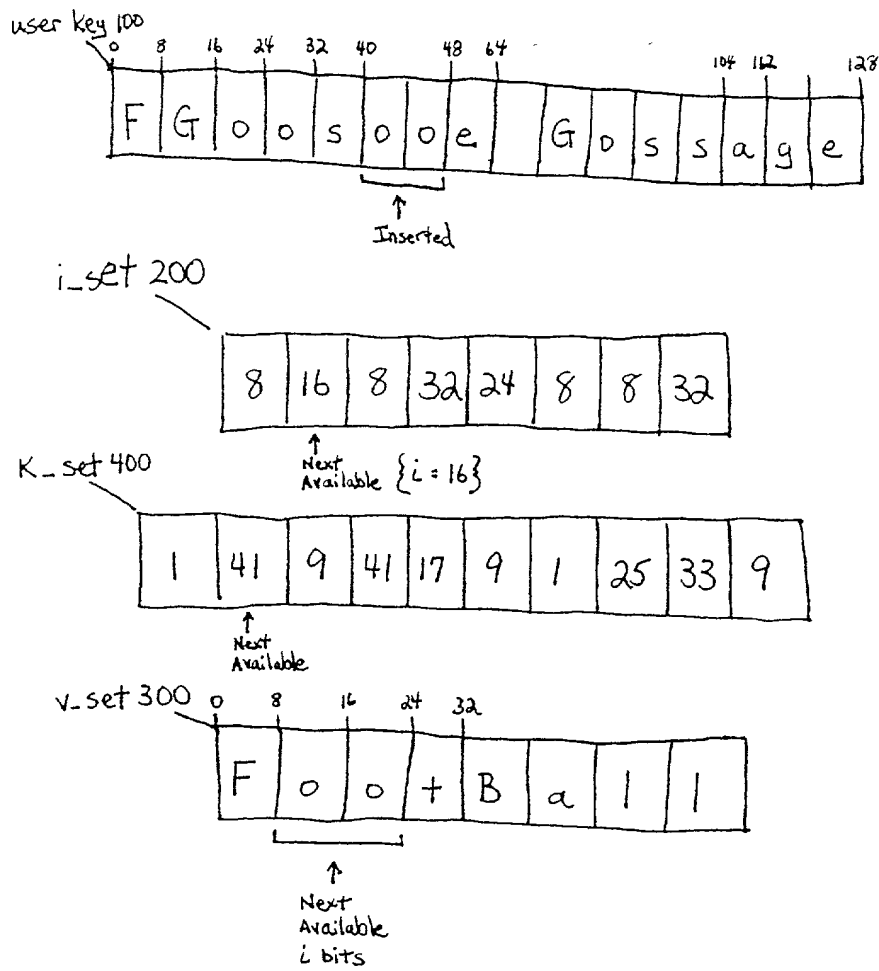
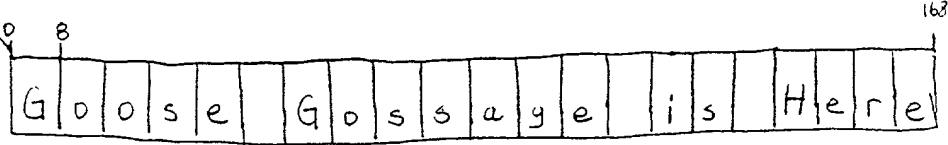
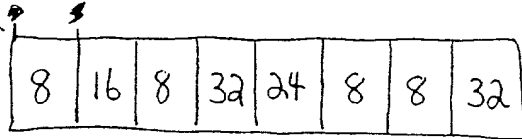


FIG. 5c (Second Insertion)

User Key 100



i\_set 200



K\_set 400

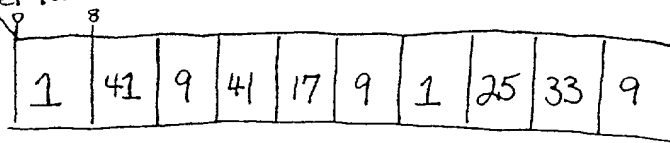


FIG. 6a (Pre-Deletion)

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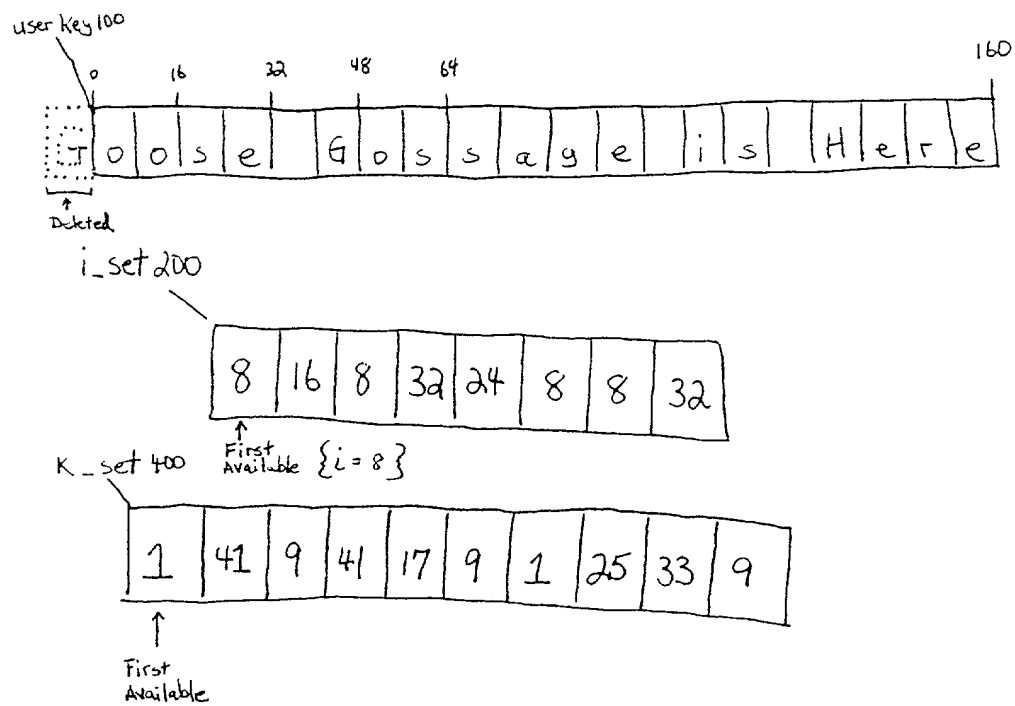


FIG. 6b (First Deletion)

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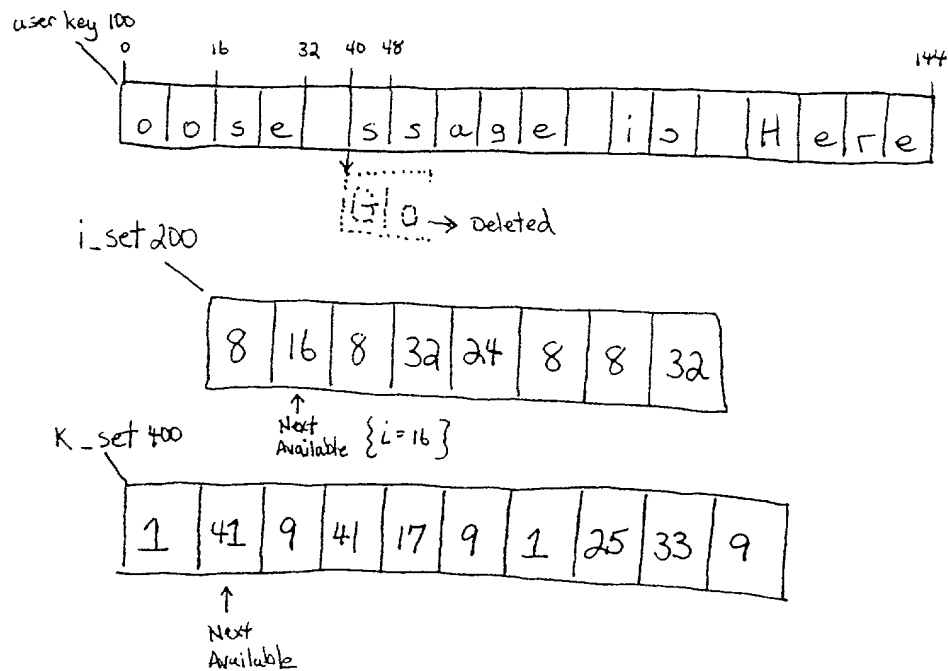


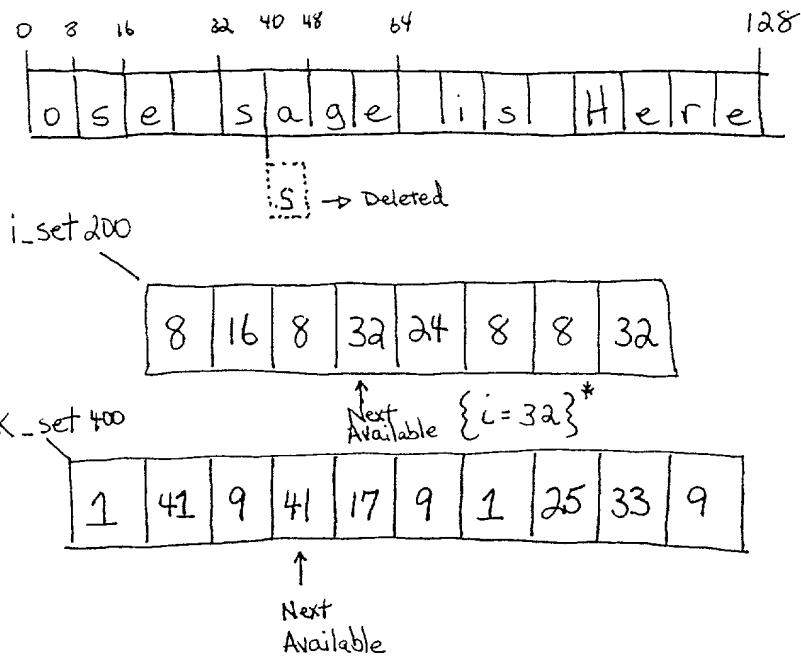
FIG. 6c (second Deletion)

Hand-drawn diagram illustrating a linked list structure for a hash table.

**User Key 100** points to a linked list of nodes containing the characters: o, s, e, s, s, a, g, e, i, s, H, e, r, e. The list starts at index 0 and ends at index 136. A label "Deleted" points to the space between the first and second nodes.

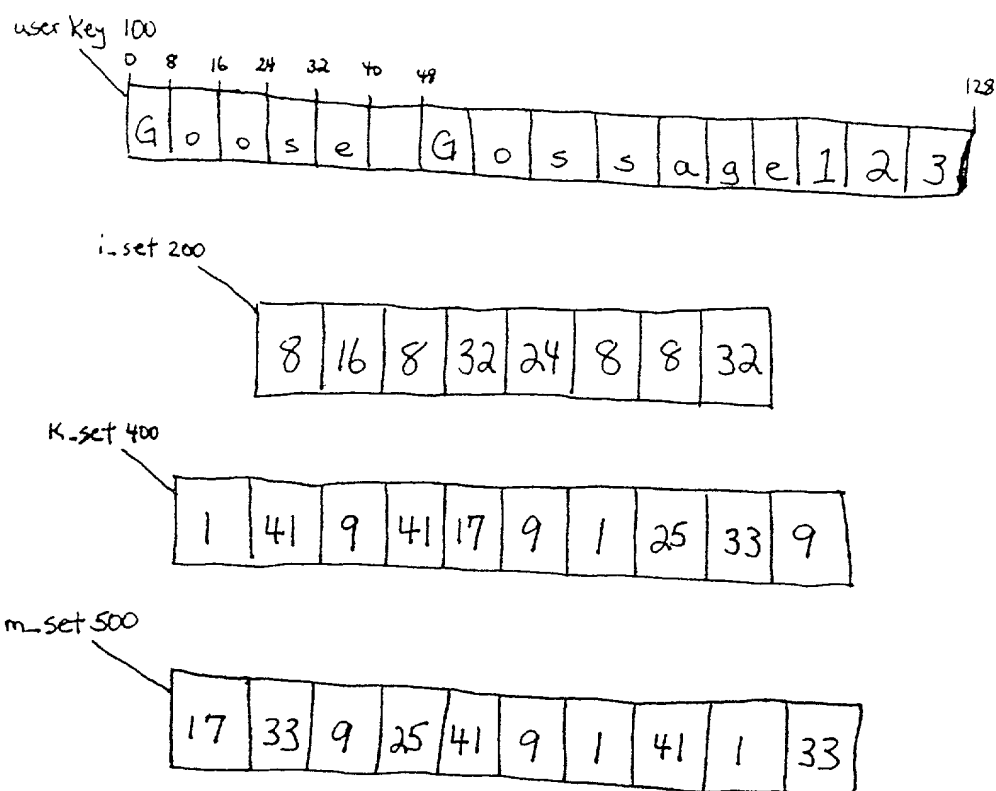
**K\_set 400** points to a linked list of nodes containing the values: 1, 41, 9, 41, 17, 9, 1, 25, 33, 9. The list starts at index 8 and ends at index 32. A label "Next Available {i=8}" points to the start of the list.

FIG. 6d (Third Deletion)



$$\begin{aligned}
 & \text{if } (u-i) < e \\
 & \text{then } i = i - (e - [u-i]) \\
 & i = 32 - (128 - (136 - 32)) = 8
 \end{aligned}$$

FIG. 6e (Fourth Deletion).



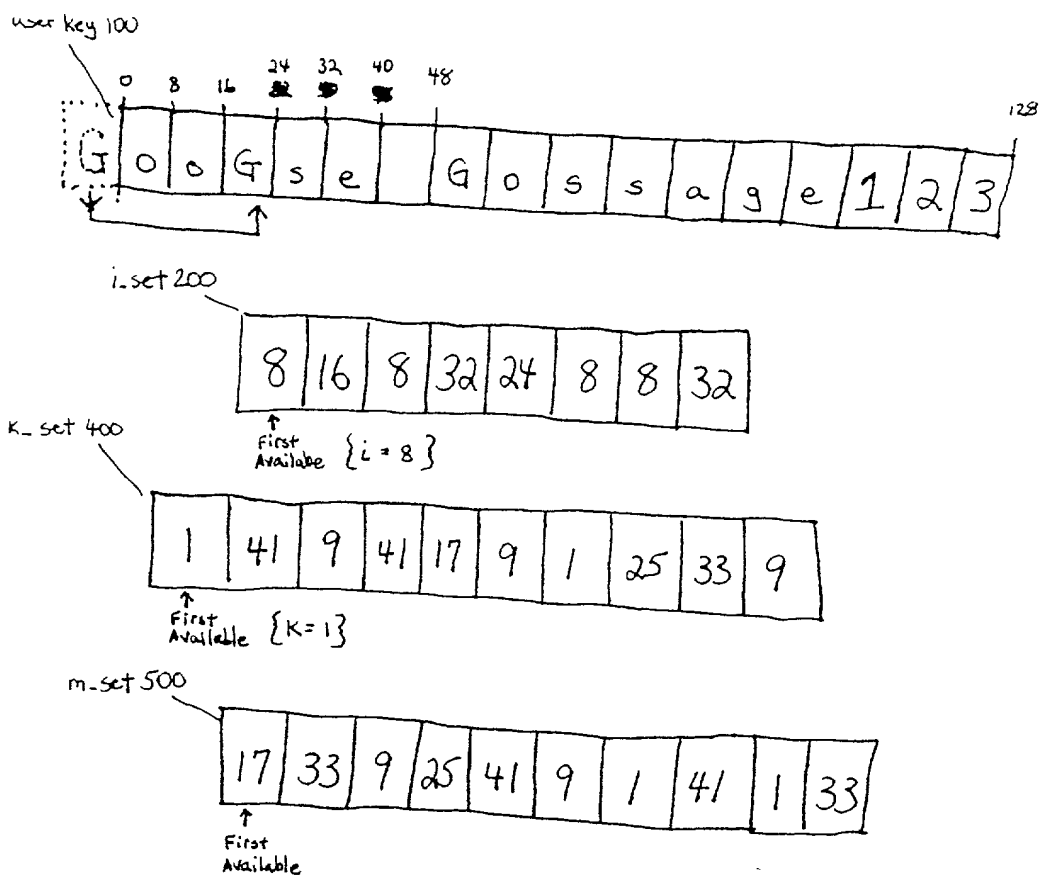


FIG. 7b (First Rearrangement)

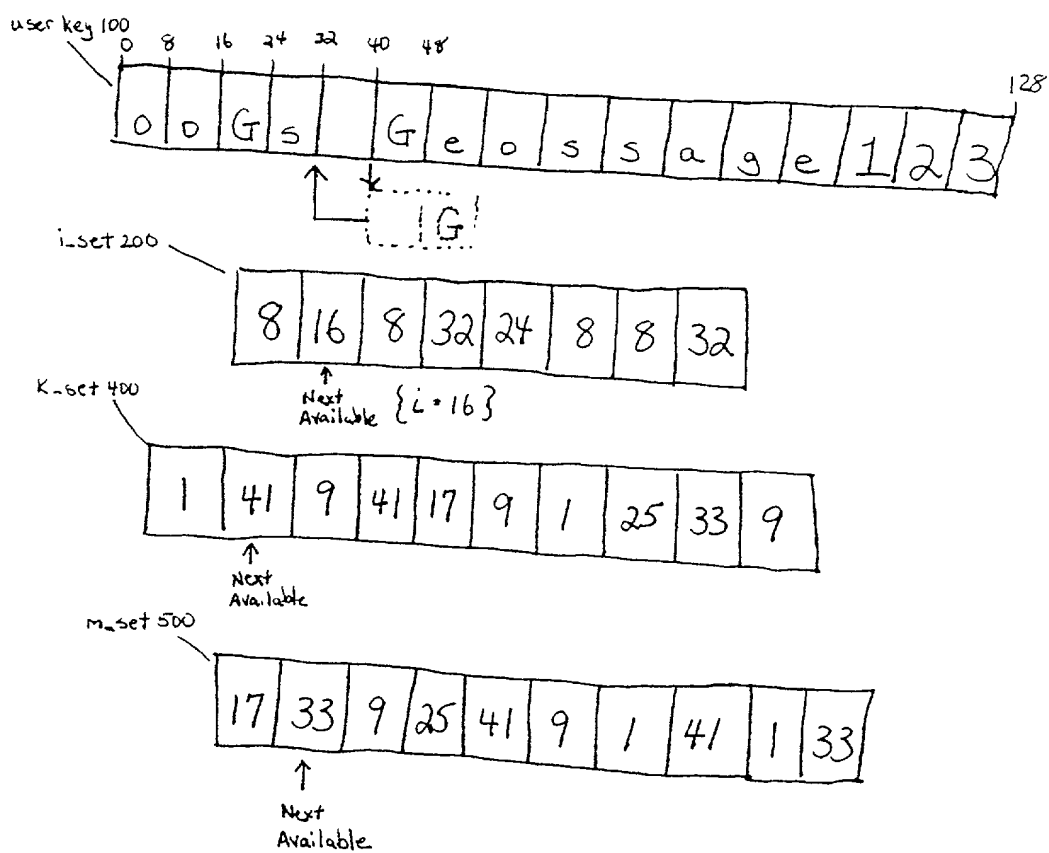


FIG. 7c (Second Rearrangement)

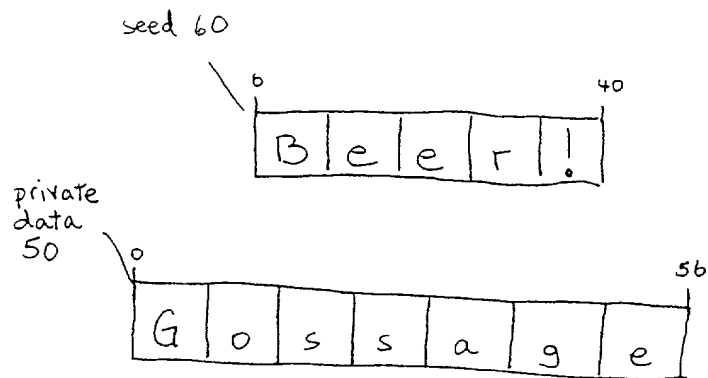


FIG. 8a (Pre-Seeded)

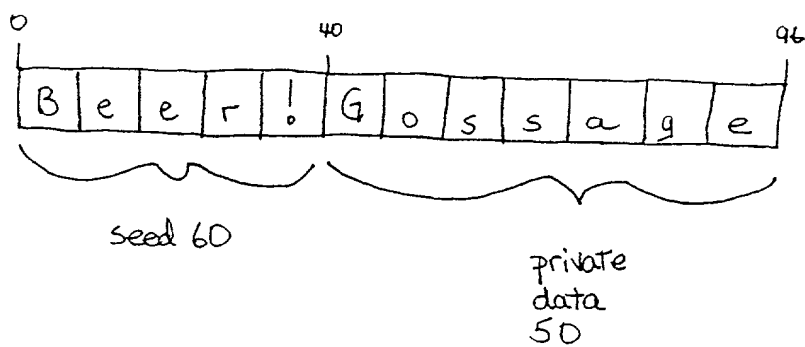


FIG. 8b (Seeded)

Cookie 300

Name	"ywi"
Value	"3/4M}7c□C÷□" <i>alt</i>

301 302 110

FIG. 9

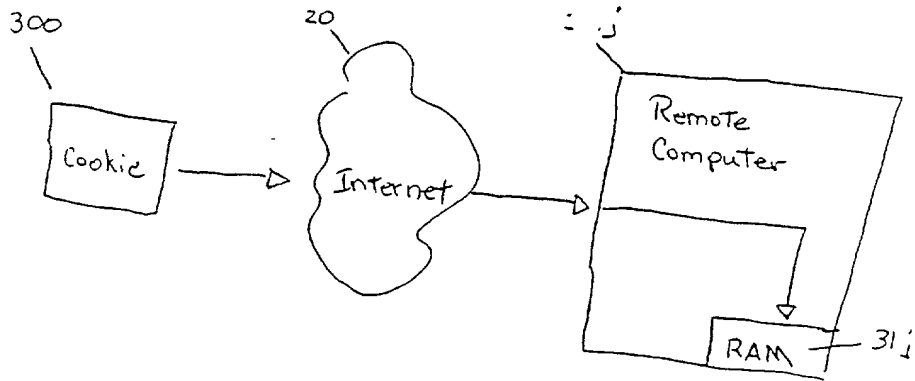


Fig. 10a

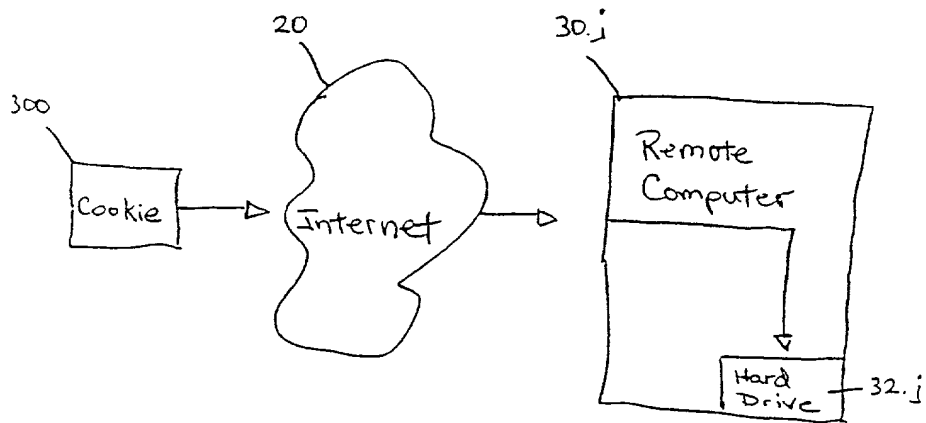


Fig. 10b

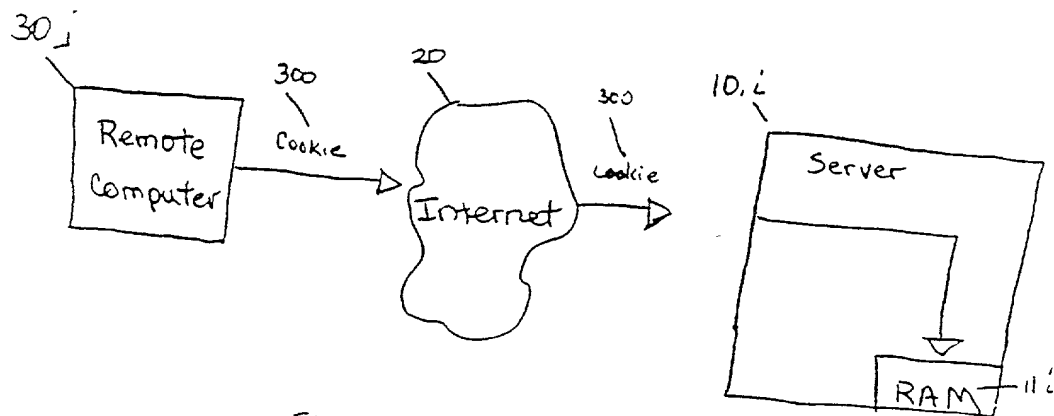
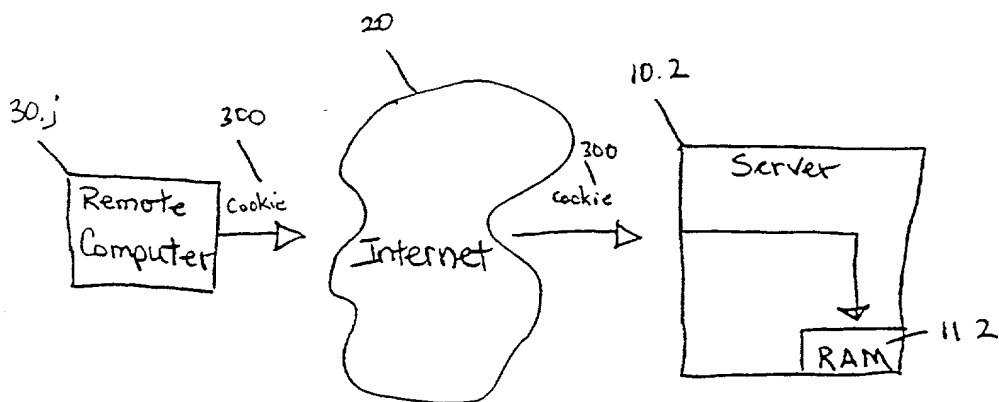


Fig. 11a

~~FIG. 11a~~



~~FIG. 11b~~ FIG. 11b

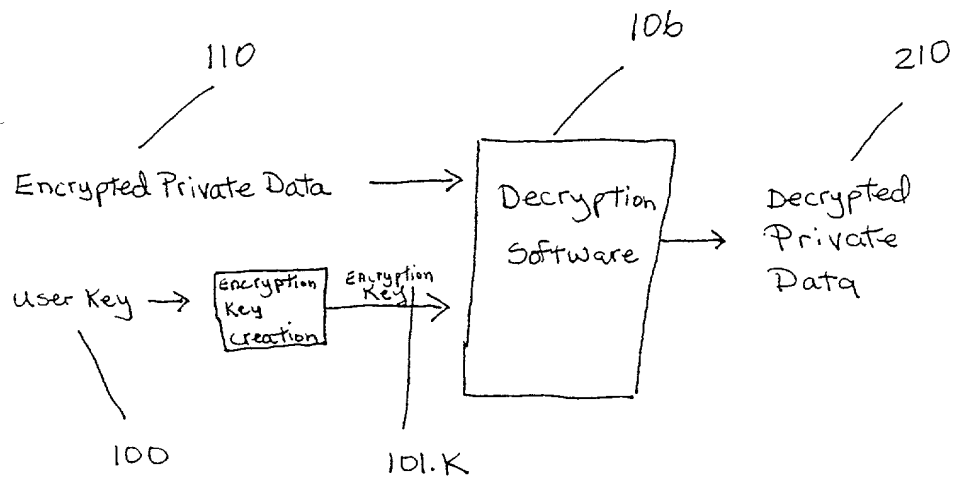


FIG. 12